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FEDERAL-STATE COOPERATIVE

SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for

### Oregon

Ву

Division of Irrigation, Soil Conservation Service
United States Department of Agriculture
and
Oregon Agricultural Experiment Station

As of

Data included in this report were obtained by the agencies named above in cooperation with the Oregon State Engineer, U. S. Forest Service, National Park Service and other Federal, State and local organizations.

MAR. 1, 1950



### FEDERAL-STATE COOPERATIVE

### SNOW SURVEYS AND IRRIGATION WATER FORECASTS

FOR

OREGON

### Report Prepared

bу

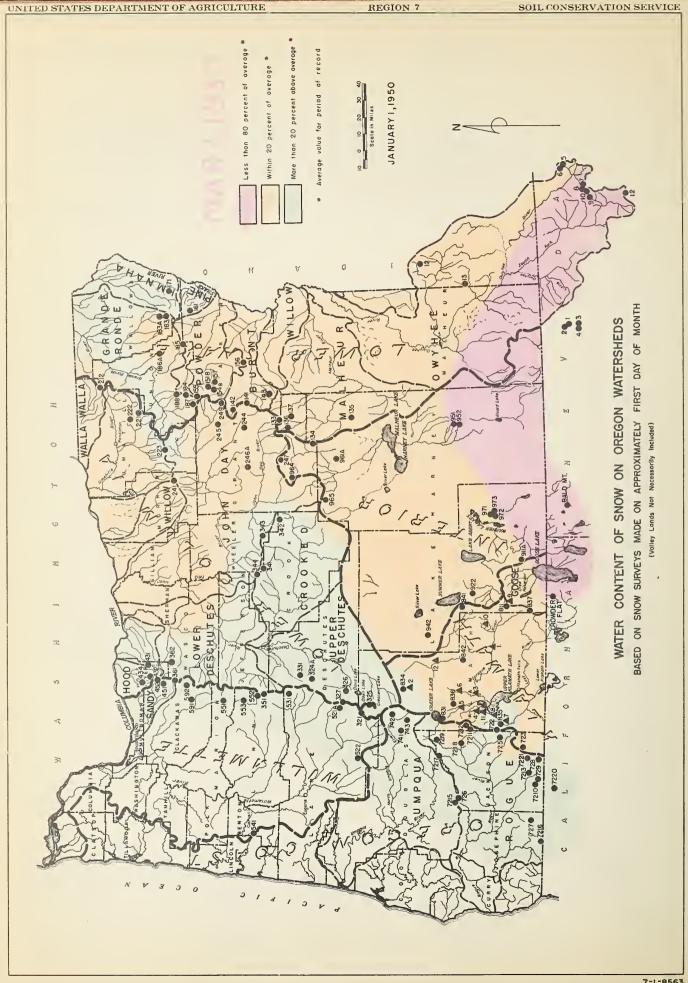
W. T. Frost, Hydraulic Engineer and R. T. Beaumont, Assistant Water Forecaster

Division of Irrigation
Soil Conservation Service
and
Oregon Agricultural Experiment Station
P• O• Box 1149
Medford, Oregon



## INDEX TO SNOW COURSES

Elev.		000	4900	6200		6670 7900 6350	5200 5293	5100 6900	6300		5720		6720 6480				3730 ek 4215 3800	5140	00177	6500 6500 6000	7,865	3730 6000	oir 4900 6500	6200 6200 3720	4630 3500 6900	5.1740
Neme	INTERIOR DRAINAGE	SILVER LAKE	CHEWAUCAN RIVER	Mill Greek	HARNEY BASIN	Deer Creek Fish Creek Hart Mountain	Idylwild Perk Izee Summit	Rock Spring Silvies	Snow Wountain Starr Ridge	WARNER LAKE	Camas Creek	CUANO LAKE	Bald Mountain Cuano Creek	WEST COAST DRAINAGE	UMPQUA RIVER	Champion Diamond Lake	Goolaway Mountain N.Umpgua near Lake Greek Trap Greek	Whaleback	Althouse	Amile Spring Big Red Mountain Billie Greek Divide	Fish Lake Goolaway Gap	Goolaway Mountain Grayback Peak	Myatt Prairie Reservoir Little Red Mountain	Seven Lakes No. 1 Seven Lakes No. 2 Silver Burn	Siskiyou Summit South Fork Canal Wagner Butte	Wha Leback
Number		6/6	¥	922		973 952 973	961A 964	134	965 2478		911A		Nev. 972			522 743 726	7215	7217	7216	729 729 722	725 726	727 727	723	7212 7212 7219	728 7218 7213	/217
Name Elev.	RIVER	Breitenbush 2325 Cascade Summit 4880 Chammian 4500	Charlton Lake 5750	McKenzie 4800 Merzion Forks 2730 Merzio Poels 3730		KLAMATH LAKE BASIN			eservoir ds No. 1	Quartz Mountain 5320 Seven Lakes No. 1 6800 Seven Lakes No. 2 6200		Sun Mountain 5350 Taylor Butte 5100	MPOAG TAVA GOOD	NTCWG	Camas Creek Quartz Mountain 5320 Strawberry 5600				INDEX TO THE CALIFORNIA OREGON	MER COMPANY SNOW WATER STATIONS KTAMATH LAKE RASIN	Beatty 4300	ъ.	emath	Lake on the moous 4,000 Pelican 4200 Agoustz Mountein 5504 Richardson Ranch 4,800	Yamsey GOOSE LAKE BASIN	Quartz Mountein 5504
Number		551 321 523	327					ن ا		811 7211 7212		836 842			911A 811 837				N.	POM				~ & 6 OI	27	6
Elev.	A DRAINAGE	RIVER	5070		5050 43900	5070	0075 uist			Summit 4800 In Spring 5900 In Summit 5098				ER			4775 4775 4570	hat			ows 4,300 4,400	Hood		11. Hood 5000 3700 ER	se 3400	
Name	LOWER COLUMBIA DRAINAGE	WALLA WALLA F	Tollgate	UMATILLA RIVER	Lucky Strike Meacham	Tollgate WILLOW CREEK	Arbuckle Nountain	JOHN DAY RIVER	Arbuckle Mountain	Beech Creek Summit Blue Mountain Spring Blue Mountain Summit	Dixie Springs Gold Center	Izee Summit Olive Lake	Snow Mountair Starr Ridge	DESCHUTES RIVER	Caldwell Ranch Cascade Summit	Charlton Lake Clear Lake	Orescent Land Derr Hogg Pass Marks Creek	New Dutchmen Flat Ooboo Meadows	Rock Creek Snow Mountain Tamarack	Three Creeks Meadows	Brooks Meadows Red Hill	Tilly Jane-Mt. Hood	Clear Lake	Phlox Point-Mt. Hood Still Greek CLACKAMAS RIVER	Clackamas Lake Peavine Ridge	
Number			212	222	223 223 221	212	277	ł	177	246A 133 17,1	577	964	965 247B		326 321	327 361	343 343 344 343 344 344 344 344 344 344	324A 341	365 27	331	431 434	1432	361	451	592 591	
Nome Elev.	UPPER DOLUMBIA DRAINACE Lower Snake in Oregon	OWYHEE RIVER	Big Bend Buckskin, Lower	buokskin, Upper Fish Creek	Gold Creek Ranger Sta. Granite Peak	Jack Creek, Lower 7000 0 Jack Creek, Upper 7800	Rodeo Flat Silver City	Silvies South Mountain No. 22	Taylor Canyon	MALHEUR KIVER Blue Mountain Spring 5900	Grane Prairie 5375 Lake Greek 5120	Rock Spring 5100 Stinking Water 4800	BURNT RIVER		Bine Mountain 5098 Dooley Mountain 5430 Tipton 5100	POWDER RIVER	Anthony Lake 71.25 Bourne 5800 Dooley Mountain 5430	adows	Summit Springs 6000 Taylor Green 5740	PINE CREEK	Schneider Meadows 5400	INNAHA RIVER	NDE RIVER	~	Beaver Reservoir 5340 Camp Carson 5970 Moss Spring 5850 Summit Spring 6000	Tollgate 5070
Number			Nev. 6	952 7	Nov. 5	Nev. 9			Nev. 12		137			143				_	137 184 185				1	A	1887 186A 186A	



March 1, 1950

### PRELIMINARY WATER SUPPLY OUTLOOK

Oregon's 1950 water supply outlook now varies from "good" to "excellent" for lands supplied by larger Cascade streams; generally "good" elsewhere in the state especially where reservoired water is the source but only "fair" in the Ochoco, John Day, Silvies, Hart Mountain, Powder, Burnt, Malheur and upper Owyhee areas.

Water content of Oregon's mountain snow pack, as of March 1, averages 16 percent above normal but 27 percent below the heavy pack of last year. Heaviest accumulations of snow now observed are in the northern and central Cascades. Rate of snow accumulation during the month of February was less than average. In general, the snow pack above 5000 feet is now 21 percent greater than it was one month ago, 73 percent of last year at this date and 108 percent of average. The low elevation snow lying between 2000 and 5000 feet is now only 4 percent greater than one month ago, 82 percent of last year and 136 percent of average.

Watershed soils under the snow are generally well primed due to recent snow me lt and heavy January rains penetrating the snow cover. Soils in the watersheds of central, southeastorn, and southcentral portions of the state are not as wet as in the Cascades and likely to absorb an early part of the snow-melt water before extensive runoff can begin.

Total water stored in all reservoirs is 6 percent more than last year on March 1, 5 percent more than in 1948 but is 16 percent less than average. About half of the more important reservoirs are half full or better. Reservoirs in the main Deschutes drainage are especially well filled while the Ochoco, Warmsprings, Agency Valley, Unity and Wallowa Lake reservoirs are not so fortunate. However, many of these larger storage basins already contain a sufficient supply for this season's irrigation needs.

Preliminary forecasts of prospective streamflow at 37 Oregon gaging stations are listed on pages 2 and 3 of this report. Final forecasts and additional snow survey data will be published on April 9th.



### PRELIMINARY STREAMFLOW FORECASTS, MARCH 1, 1950

The following preliminary runoff forecasts are based on present mountain snow cover and on the assumption that average increase of snow cover will occur during March. Greater or less than average increase in mountain snow cover during March will correspondingly modify these estimates:

DANTAL AND ORDERAN					Thous A.F.
BASIN AND STREAM			sured Ru		10-yr.avg.
	1950	1949	1948	1947	1939-48
Columbia R. at The Dalles	94000.0 <sup>d</sup>	٦.	27590.0		88246.5
Columbia R. at the Dailes	94000.0	2854 •0		8488.0	00240 • 0
NORTHCENTRAL OREGON	. 9	2004.0	Э	0400•0	
Hood River, W. Fk. near Dee	21.0.0	225.1	3 50 1	111.1	130.0
White R. below Tygh Valley		265.6		103.1	
will the We polow lygh variey	230.0	200.0	T11.00	TOO • T	124 0
UMATILLA-WALLA WALLA					
Walla Walla R.So.Fk.nr. Milton	70.0		100 7	62.7	66.2
	70.0 92.0	a	102.1 148.7		83.3
Umatilla R. near Gibbon Umatilla R. at Pendleton		a			
	180.0	a	311.3		
McKay Cr. above McKay Reservoir	30.0	а	63.4	16.1	28.6
NO DOUGA CORDINA ODDOON					
NORTHEASTERN OREGON	100.0		76C 0	110 0	177 0
Grande Ronde Ronr LaGrande	190.0	a	366.2	118.8	173.9
Catherine Greek near Union	75.0	a		60.9	68 • 8
Bear Creek near Wallowa	80.0	а	97.4	69.6	68.6
Lostine R. near Lostine	140.0	a		127.7	118.9
Hurricane Cr. near Joseph	48.0	· a		49.9	43.6
Wallowa R. E.Fk. plus Power Pl.	12.0	a	15.7	10.4	
Imnaha River at Imnaha	365.0	a		228.1	
Powder River at Salisbury	50.0	a		43.6	
Burnt R.nr. Hereford (Natural Flow)	30.0	а	62.7	20.2	37.6
FASTERN OREGON					
Malheur R. Mid. Fk. nr. Drewsey	42.0	a	74.0	34.0	71.4
Malheur R. N. Fk. at Beulah	36.0	a	64.4		
Owyhee R. above Owyhee Reservoir	300.0°	a	280.6°	216.4°	486.7°
Strawberry Cr. nr. Prairie City	6.5	a	11.0	7.9	8.0
belawberry of a mr a frame of cy	0.0	a	11.00	1 • 3	0.0
HARNEY BASIN					
Silvies R. near Burns	50.0	a	133.1	47.7	90.2
•					
CENTRAL OREGON					
Ochoco Reservoir Net Inflow	25.0	a	72.3	8.2	24.7
Crescent Lake Net Inflow	28.0		27.4		
Odell Creek near Crescent	35.0		34.7		
Tumalo Creek and C.S. Canal	51.0		53.2		
Squaw Cr. near Sisters		a		45.7	
1	30.53				13.00
SOUTHCENT RAL OREGON					
Deep Creek Above Adel	55.0 <sup>b</sup>	а	70-8 <sup>b</sup>	29-1 b	55.6 <sup>b</sup>
,	30.5	~	.0.0	~0 •1	00 •0
KLAMATH BASIN					
Upper Klamath Lake Net Inflow	4] 5.0	407 -8	461.5	326-2	454.8
T. T					
a - Discharge data not available	c - M	arch-Jul	ly rathe	r than	April-Sept.

c - March-July rather than April-Sept.

a - Discharge data not available c - March-July rather than April-Sept. d - Forecast by Boise office



### (Continued)

	AprSe	entinc	Streemf	ow in	Thous .A .F.
BASIN AND STREAM	Forecas	_	sured R		10-yr avg
DAGIN AND GIRDAM	1950				<u>.</u> ~
	1330	1343	1340	TOTI	1303 40
SOUTHERN O TEGON					
Hyatt Reservoir Net Inflow	5.8	a	9.1	2.1	5.1
Fourmile Lake Net Inflow	7.2	a	11.0	6.0	
Little Butte Cr.N.Fk. below				•	
Fish Lake (Natural Flow)	14.5	a.	16.2	10.1	13.0
Rogue R. N.Fk. above Prospect	345.0		343.7	248.8	276.4
Clearwater River above Trap Creek	61.0	71.8	67.4	61.4	58.5
No. Umpqua R. below Lake Creek	160.0	183.0	174.3	157.0	149.8
WILLAMETTE VALLEY					
Willamette R.Mid.Fk.at Eula	1160.0	1019.2	1025.9	737.1	717.6
McKenzie R.at McKenzie Bridge		716.4			
McKenzie River near Vida		1516.7			1065.8

a - Discharge Data not available



### STATUS OF SNOW COVER AS OF MARCH FIRST Summary of Snow Survey Data By Watersheds as of About March First

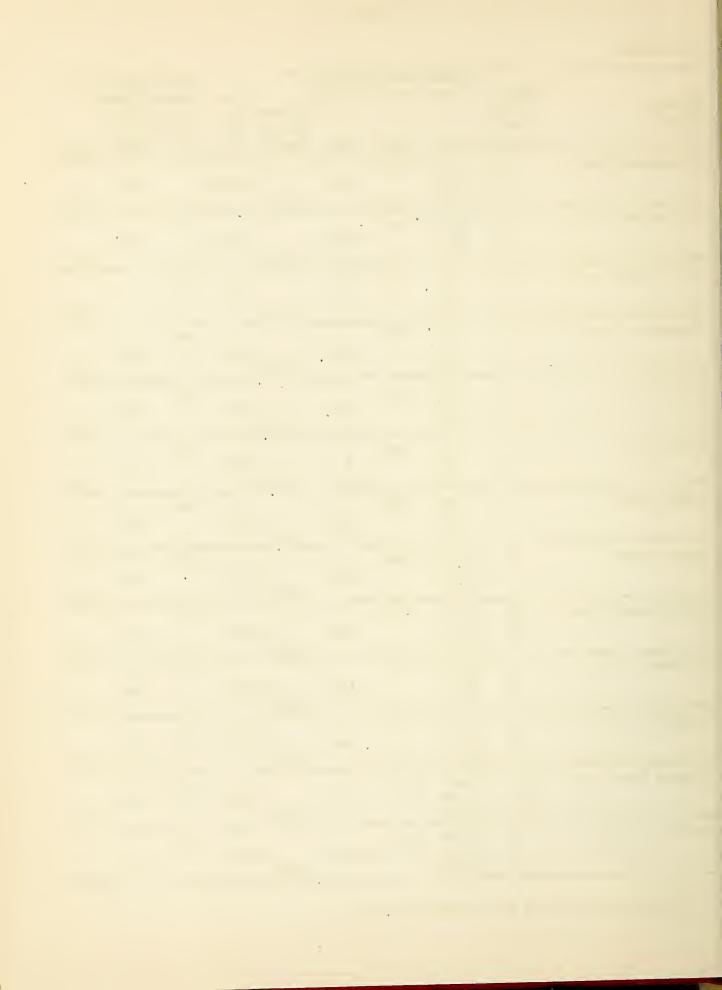
		Average	a Water	Depth	า์ท	195	0 Snow	Water
STREAM	Number of Snow			(Inches	Yrs. Avg.Past of	Dep as	th (In	ches) nt
BASIN	Courses Averaged	1950	1949	1948	Yrs.of Rec- Record ord	of 194 <b>9</b>	that 1948	in Avg.
Owyhee River	15 14 15	5.9 5.9 5.9	11.1	4.9	(1-22) 8•4	53	120	70
Malheur River	5 5	8.9 8.9	11.7	5.9	(11-14)	76	151	101
Burnt River	5 2 2 2 2	8.9 8.0 8.0	13.0	7.4	(11-14)	62	108	91
Powder River	6 6 6	18.2 18.2 18.2	24.2	15.6	(3-13) 17•4	75	117	104
Grando Rondo River	6 6 6	24.1 24.1 24.1	34.1	23.3	(6-13)	71	103	110
Walla Walla River	1 1 1	26.0 26.0 26.0	44.9	28.6	25.3	58	91	103
Umatilla River	4 4 4	15.3 15.3 15.3	25.6	14•4	(11-13)	60	106	112
Willow Creek	1 1 1	11.5 11.5 11.5	15.3	<b>P</b> **	(8) 10•6	<b>7</b> 5	-	108
John Day River	8 7 8	10.8 10.7 10.8	14.8	10.3	(8-14)	73	104	105
Deschutes River	5 5 5	38.8 38.8 38.8	47.0	24.4	(3-9) 32.2	83	159	120
Crooked River	3 3 3	8.6 8.6 8.6	10.3	6.8	(7-14) 7•6	83	126	113
Hood River	2 2 2	42.1 42.1 42.1	72.5	33.1	(2) 52•9	58	127	78
Sandy River	3 3 3	44.2 44.2 44.2	59.7	27.9	(8 <b>-</b> 12)	74	159	166



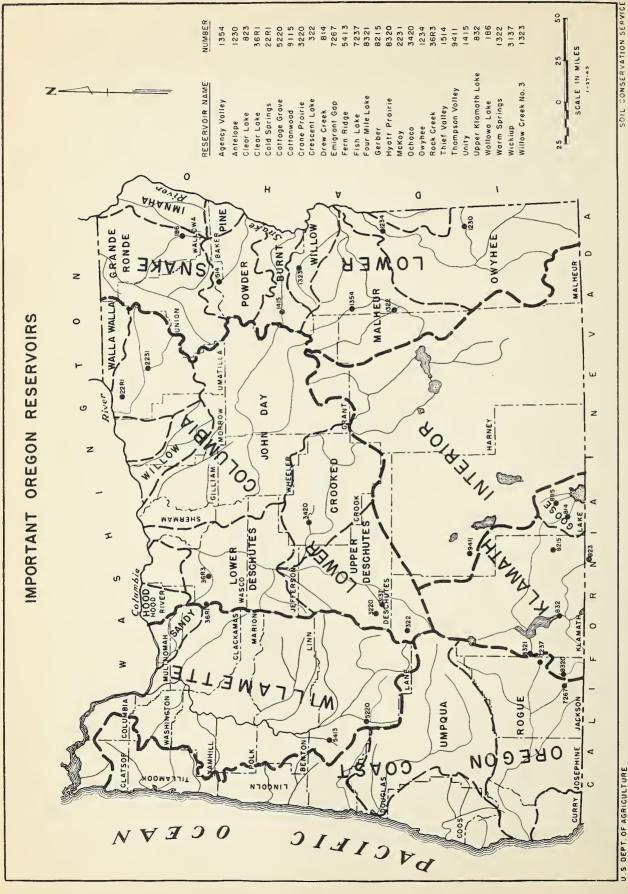
(Continued)

(John Hada)			Water					Snow Wa	
STREAM	Number of Snow	Snow	Cover		Avg . Past		as	th (Inche percent	s)
BASIN	Courses Averaged	1950	1949	1948	Yrs.of Record	Rec- ord	1949	that in 1948	Avg.
Clackamas River	2 2 2	27.7 27.7 27.7	33.9	11.2	13.7	(9-12)	82	248	202
Willamette River	6 5 6	41.6 39.1 41.6	50.0	21.6	30.0	(1-11)	83	190	139
Silver Lake Basin	1 1 1	2.8 2.8 2.8	3.8	T	2.8	(1)	74	-	100
Chewaucan River	1 1 1	7.5 7.5 7.5	7.9	2.9	6.2	(11)	95	258	121
Warner Lake	1 1 1	8.3 8.3 8.3	12.8	4.6	8.3	<b>(</b> 6)	65	181	100
Guano Lake	2 1 2	1.1 1.1 1.1	5.0	T	3 •8	(10)	45	644	34
Harney Basin	4 4 4	5.9 5.9 5.9	9.0	4.5	6.6	(14)	66	131	89
Umpqua River	3 3 3	32.2 32.2 32.2	<b>39.</b> 0	22.1	23•2	2-21)	82	145	139
Upper Rogue River	13 11 13	26.2 21.7 25.5	33.6	13.7		1-17)	78	158	119
Applegate River	4 5 5	23.9 23.0 23.0	28.5	12.3	15.2	1-12)	84	187	151
Illinois River	2 2 2	18.7 18.7 18.7	18.3	5.4	10.1	8-11)	102	346	185
Klamath Lake Basin	20 17 20	15.4% 11.3% 15.4%		7 •1	( 14.3	4-23)	80	160	108
Goose Lake Basin	3 3 3	25.4* 25.4* 25.4*		21.3	20.9	(5-6)	87	119	126

<sup>\*</sup> Including Copco water measurement stations.







SOIL CONSERVATION SERVICE

### STATUS OF RESERVOIR STORAGE ABOUT MARCH 1, 1950

BASIN			HOUSANDS	ACRE FEI	et in st		BOUT MARL
and STREAM	RESERVOIR (	CAPACITY Thous .A.F.)	1950	1949	1948		Yr • Avg • 1939-48
	/	UPPER COLUM	IRTA DRATI	VAGE			
		LOWER SNAK	E IN OREC	ON			
Owyhee	Antelope	36.5	N. R.	1.8	7.0	6.6	
	Owyhee	715.0	429.8	294.9	349.1	541.6	524.3
Malheur	Warm Springs	191.0	17.8	33.5	33.8	120.8	
	Agency Valley	60.0	22.4	40.7	40.7	44.4	43.7
Burnt	Unity	25.2	. 3.6	8.5	7.3	11.9	10.5
Powder	Thief Valley	17.4	N. R.	9.2	17.4	17.4	15.5
Grande Ronde	Wallowa Lake	40.9	12.2	19.0	17.6	24.8	22.1
		LOWER COLUM	BIA DRAII	NAGE			
Umatilla	McKay	74.0	46.6	.42.8	66.6	<b>5</b> 6 •7	46.6
	Cold Springs	50.0	35.6	35.0	45.6	43.3	39.9
Deschutes	Ochoco	46.0	6.3 53.9	25.4		27.6	
	Crescent Lake	80.0	53.9	52.9	46.8	50.1	
	Crane Prairie	50.0	39.9 <sup>e</sup>	34.6	36.7	40.6	
	Wickiup	180.0	186.9	178.8	134.6	86 •6	
Willamette	Cottage Grove	30.1b	9.2	6.7	9.2	6.0	7.4 <sup>f</sup>
	Fern Ridge	94.2 <sup>b</sup>	26.4	6 <b>2 .</b> 8	38.2	26 •0	27.4 <sup>g</sup>
		WEST COAS					
Rogue	Fish Lake a	7.7	4.7	5.1	3.4	4.3	
	Fourmile Lake	16.0	7.3	7.2	2.3	4.8	
	Emigrant Gap Hyatt Prairie	8.2 16.0	6.6 4.1	6.7 7.5	8.2 3.1	4.9	
	nyatt Frairie	10.0	4.1	7.5	2 • 1	2.8	Ð •′±
Klamath	Upper Klamath	Lake 584.0°	343.6	312.1	314.4	324.1	
	Gerber	94.0	26.5	12.9	23.2	36.8	
	Clear	440.2	122.2	138.1	146.7	211.3	243.3
Goose Lake	Cottonwood	4.1	0.8	0.0	0.3	0.8	0.6 <sup>h</sup>
	Drew	62.5	40.0	38.1	25.0	27.4	

h - Excl. 1942

- February 23, 1950

N. R. - No Report

a - By Ditch to Rogue River side from Klamath Drainage

b - Storage space reserved for flood control

c - Based on gage zero elevation of 4135.0

d - February 11, 1950

e - February 17, 1950

f - 1943-48°

g - 1942-48



### VALLEY PRECIPITATIONa

DRAINAGE DIVISIONS		RRENT YEAR - Mar. 1, 1950 D		YEAR - Mar. 1, 1949 D
Southeastern	4.75	83	3.31	-1.67
Southcentral	3,53	-1.96	3.88	-1.39
Central	11,11	+2.13	5.96	-0.22
Columbia River	10,30	+ •62	10.67	+1.08
Wallowa Mountains	7 •85	- •O1	7.21	-0.36
Blue Mountains	8 •5 <b>7</b>	- •04	7 • 75	-0.07
Southern	15.24	- •59	14.66	-1.01
Willamette Valley	40.58	+6.98	42.29	<b>+</b> 6.95

P - Inches Precipitation

D - Inches Departure from Normal

Southeastern -

Malheur and Owyhee drainages.

Southcentral -

Interior Basin drainages and Goose Lake.

Central -

Deschutes and Crooked drainages.

Columbia River -

Lower valleys of the Walla Walla, Umatilla, John Day,

Deschutes and Hood River drainages.

Wallowa Mountains -Imnaha, Wallowa, Catherine, Eagle and Pine drainages.

Blue Mountains -

Upper valleys of the Burnt, Powder, Grande Ronde, Umatilla Walla Walla, John Day, Silvies and Malheur drainages.

Southern -

Umpqua, Rogue and Klamath drainages.

Willamette Valley - All Willamette drainages.

a - Preliminary data computed from Weather Bureau records.



SUREMENTS	Past Record	Years Av. Water	of Content	Record (Inches)
SNOW COVER MEAS	fater Content (In.)	Same Approx. Y		1949 1948
	Water			1950
		Date Snow	of Depth	Survey (In
				se Elev.
LOCATION				Twp. Range
-		Number	or	State Sec. Twp.
		Num	0	Sta
	DRAINAGE BASIN	and	SNOW COURSE	

### 闰 ठ। 41 zi HI **41** ۳İ A **4**1 H m Z pl -1 01 01 $\alpha$ ध्या U P P

# LOWER SNAKE IN OREGON

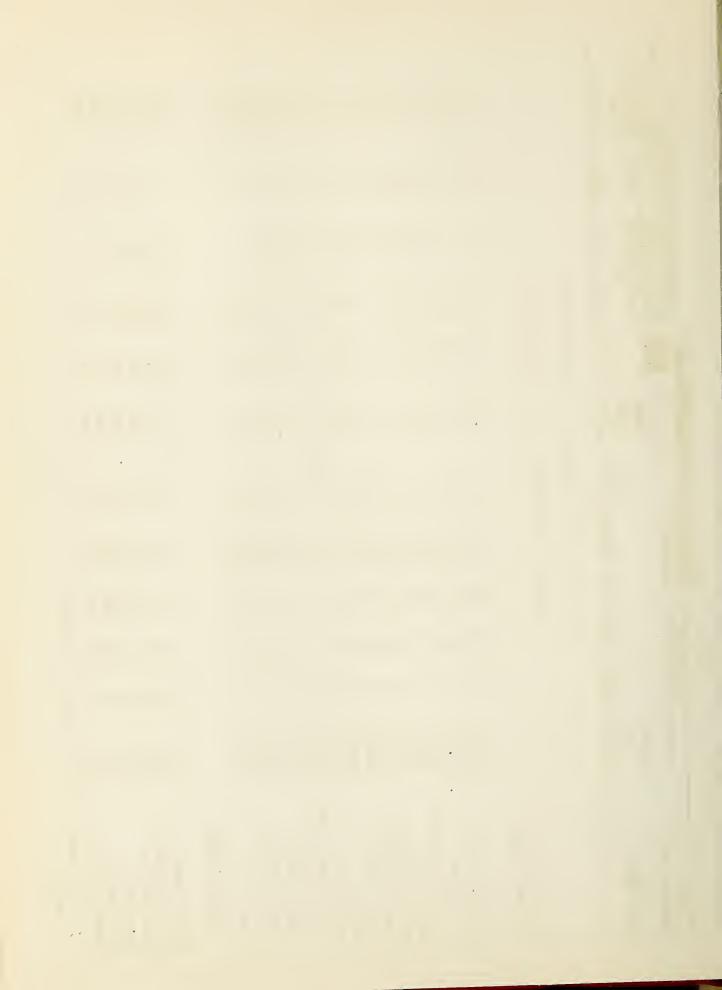
### ONTHEE RIVER

0•6	12.7	9 <b>.</b> 2	6.7	9•4	& & &	4.08	7.9	5.4	10.2	11.3	0.9	2.8	10.3	10.0	12.9
21	<b>~</b>	16	18	18	16	22	18	10	16	10	15	18	16	14	ω
6.3	1	2•0	4.9	6.4	7.8	8•3	<b>6</b> •8	0.0	8.9	7.8	1.3	0.0	8.2	7.3	i
14.3	12.7	15.2	10.5	7.6	13.0	4.9	7.5	2°6	17.2	16.6°	& &	0•9	8.7	13.1	19.3
8•4*	6.3	*0° /	5.4*	9.3	7.8	*0.0	7.3	ડ જે	7.1*	ayed	%°2*	*0°0	0.9	*8 <b>*</b> 9	13.0
25.6	20.1	20.0	16.5	25.6	22.2	0.0	22.3	9•6	19.7	ment del	9•9	0.0	15.9	20.2	34.0
3-1	2-26	2-26	3-1	3-1	3-2	2-28	2-28	3-1	2-26	Measure	2-28	3-1	3-3	2-28	3-2
6700	6500	9800	0099	7800	6700	6800	6700	7200	6800	6340	6200	5700	7200	7250	6400
26E	34E	54E	26E	39医	39E	53E	40E	46E	53E	5W	53E	55正	39E	53E	311
45N	47N	43N	45N	44N	45N	42N	44N	39N	43N	78	3 9N	39N	45N	42N	58
30	∞	31	31	22	25	18	18	18	36	35	35	O3	H	o,	9
Nev•6	Nev.6	Nev.7	Nev.5	Nev.4	Nev.1	Nev.9	Nev.3	Nev.6	Nev.8	Idaho	Nev.12	Nev.11	Nev.2	Nev.10	Idaho
Big Bend	Disaster Peak	Fry Canyon	Gold Ck.Ranger Sta.	Granite Peak	Lower Buckskin	Lower Jack Creek	Martin Creek	Midas	Rodeo Flat	South Mountain No.2	Taylor Canyon	Tremewan Ranch	Upper Buckskin	Upper Jack Creek	Silver City

## MALHEUR RIVER

7.8	14.6	8-5	10.3	9•9	4.2
വ	77	11	11	14	11
0.9	11.3	<b>6</b> • 7	7.e6	4.1	ı
10.8	19.1	13.9	12 • 7	8•6	4.7
layed	14.4	8.6	9•4	5 6	6.3
ment de	40.5	26.9	28.6	18.7	15 • 8
Measure	2-28	2-27	2-27	2-27	2-26
				5100	
36E	35E	34E	$33\frac{1}{2}E$	32E	34瓦
14S	158	168	168	188	218
16	21	24	2	23	33
143	133	137	136	13.4	135
Barney Creek	Blue Mtn. Spring	Crane Prairie	Lake Creek	Rock Spring	Stinking Water

<sup>\*</sup> Telegraphic - subject to minor revision c March 8



1950	
MARCH.	•
S URVEYS.	
SNOW	
OREGON	

		LOCATI	NOT					SNOV	OVER ME	SNOW COVER MEASUREMENT	NTS	
DRAINAGE BASIN								Water	Water Content (In.	(In•)	Past	Recor d
and	Number					Da te	Snow		Same A	Same Approx.	Years	Av.Water
SNOW COURSE	or					of	Depth		දූ	Date	of	Content
	State	Sec	TwD	Rang e	Elev.	Survey	(In•)	1950	1949	1948	Record	(Inches)
BURNT RIVER												
Barney Creek	143	16	14S	36E	5950	Measure	Measurement delayed	layed	10,8	0•9	2	7.08
Blue Mtn. Summit	141	9	128	36臣	2098	2-28	25.0	8.3	13.8	8.1	14.	8 8
Dooley Mountain	156	32	118	4OE	5430	3-5	23.8	7.8	12,2	9 9	I	8.9
Tipton	142	34	10S	35 <u>≒</u> E	2100	Measurc	Measuroment delayed	layed	10 <u>,</u> 8	10.2	7	10.0
POWDER RIVER												
Anthony Lake	155	18	78	37E	7125	3-1	66.7	24.0	36.3	22.1	10	24.0
Bourne	154	33	88 8	37E	5800	3-2	43.6	16,5	21.5	11.8	13	14.0
Dooley Mountain	156	32	118	40E	5430	3-2	23,8	7.08	12,2	9•9	11	8 • 9
Eilertson Meadows	151B	18	88	38E	5400	3-4	29.6	10,07	16,5	8.3	15	11.1
Gold Center	249	21	98	36E	5340	3-2	35,02	13,8	16.1	11.8	10	11.6
Goodrich Lake		34&35	88	38E	6775	2-28	87.8	36,7	42.6	32.8	83	3≟•6
IMNAHA KIVER						• 1						
Aneroid Lake #1	183	16	48	45E	7480	2-27	92.2	35.8	37.4	29•1	9	28•6
Aneroid Lake #2	183A	16	48	75E	7000	2-27	66.2	26.0	33.0	24.5	9	23.0
Coverdale	171	22	58	47E	4250	2-22	38•6	14.3	17.4	10.4	ည	11.0
GRANDE RONDE RIVER												
Aneroid Lake #1	183	16	4S	45E	7480	2-27	92,02	35 8	3764	29.1	9	28.6
Aneroid Lake #2	183A	16	4S	45E	2000	2-27	66,2	26.40	33,0	24.5	9	23.0
Anthony Lake	155	18	7.8	37E	7125	3-1	299	24.0	36 5	22.1	10	24.0
Beaver Reservoir	188	ω	58	37E	5340	Measur ement	ment de	delayed	16.7	10.7	11	11.4
Meacham		24&25	13	35E	4300	2-25	33,0	12 0	2046	9•3	13	7.6
Moss Spring	186A	28	38	41E	5850	3-2	53.8	20.7*	32.1	26.4	H	21.1
Tollgate	212	32	7	38E	2070	2-25	65.6	26 40	44.0	28.6	7	25.3
	4											

<sup>\*</sup> Telegraphic - subject to minor revision

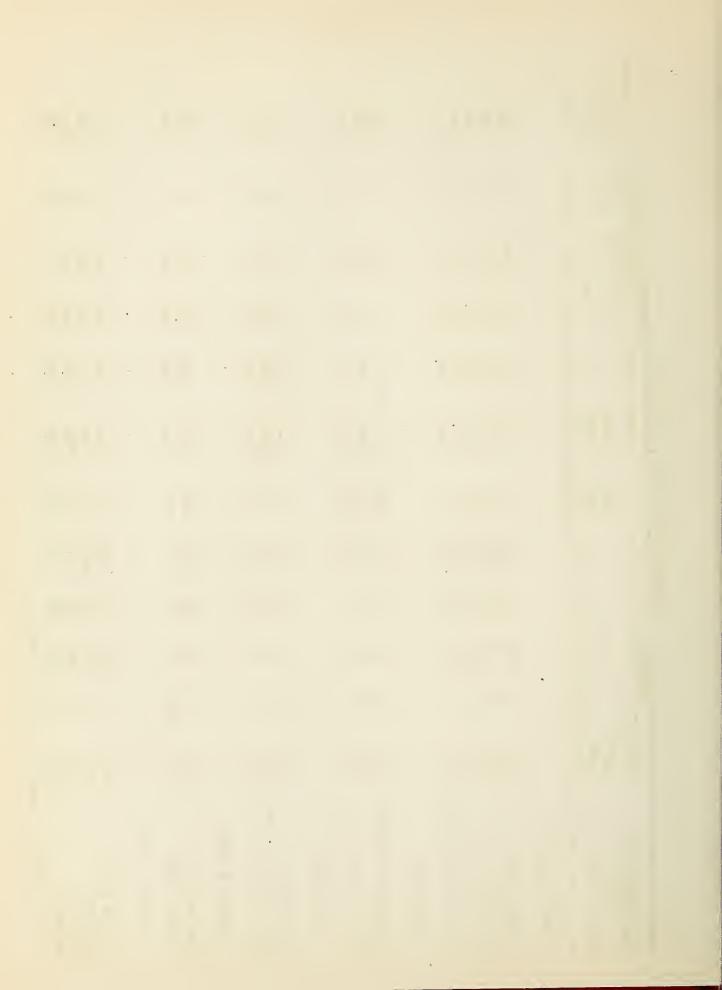
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				ORE	OREGON SNOW	W SURVEYS,	S, MARCH,	н, 1950					
		TOC	LOCATION					1 1.	SNOW COVER MEASU GREENTS	MEASU (E)	H		
DRAINAGE BASIN and	Number					Da te	Snow	Water	Same Approx.	(In.)	Years	Past Record	
SNOW COURSE	or State	Sec	Twp	Range	Elev	of Survey	Depth $(In.)$	1950	Date 1949	e 1948	of Record	Content (Inches)	
			1	O W E	ر 20	I	V 1	T A H	N A G.				
				)   :	1		: [ : ]	(  					
WALLA WALLA RIVER													
Tollgate	212	32	41	38E	5070	2-25	65.6	26.0	44.9	28.6	11	25.3	
UMATILIA RIVER													
Emigrant Springs	222	29	Ħ	35E	3925	2-25	23.4	8•4	19.0	8•0	13	7.47	
Lucky Strike		28	38	32E	5050	2-24	45.4	14.8	17.7	11.6	11	11.8	
Meacham	221	24&25 23	S F	35E	4300	2-25	33.0	12.0	20.6	0°3	13 [[	7.00	
Tollgate	717	26	4	120°	0 /00	07-7	0000	0.0%	44.	0.07	11	C • C 7	
WILLOW CREEK													
Arbuckle Mountain	241	33	48	29臣	5400	2-27	32.5	11.5	15.3	ı	ω	10.6	
JOHN DAY RIVER													
Arbuckle Mountain	241	33	4S	29E	5400	2-27	32.5	11.5	15.3	•	ω	10.6	
Beech Creek Summit	246A	색	128	30E	4800	2-25	24.6	9.1	8.7	4.2	13	6.1	
Blue Mountain Springs	133	21	158	35E	5900	2-28	40.5	14.4	19,1	11.3	14	14.6	
Blue Mountain Summit	141	9	128	36E	5098	2-28	25.0	8,3	13.8	8.1	14	& & &	
Gold Center	249	21	98	36E	5340	3-2	35.2		16.1	11.8	10	11.6	
Izec Summit	964	28	168	29E	5293	2-24	29.3	7.3	10,9	7.1	77	0 8	
Olive Lake	245	14	SS	33毫E	0009	2-25	49.1		25.2		<b>1</b> 4		
Starr Ridge	247B	20	158	31E	5150	2-24	20.2	5 3	0.6	3.7	14	5.47	
CROOKED RIVER													
Warks Creek	344	25	125	19E	4540	3-1	18.2	9•9	7.7	3.0	12	4.5	
Ochoco Meadows Tamarack	341 342	21 8	13S	20E 25E	5200 4800	2-28	31.3	12.0	14.4	9.1	14 7	9.5	

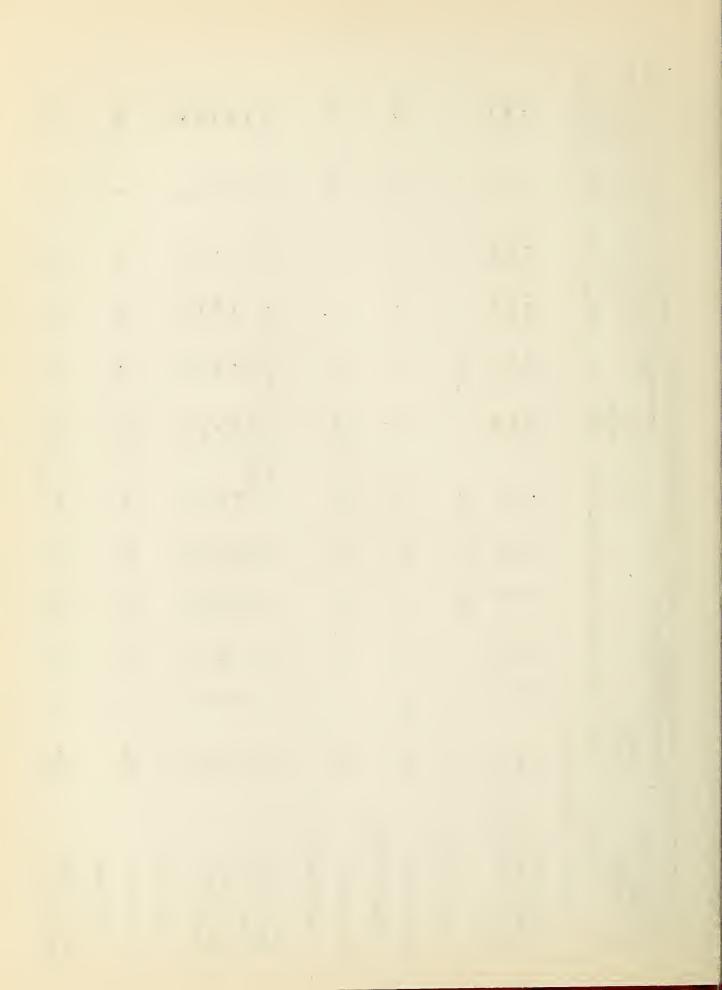


1950
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SNOW
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		7001	LOCATION						SNOW COV	THE MELLS	SNOW COVER NE SUREMETTS	
DRAINAGE BASIN								Water	Content (In.	(In.)	Past	Record
and	Number					Da te	Snow		Samo A	Same Approx.	Years	Avellater
SNOW COURSE	or					of	Depth		Date	Φ	Jo	Content
	State	Sec	Twp	Ran ge	Elev.	Survey	(In.)	1950	1949	1948	Record	(Inches)
DESCHUTES RIVER												
Cascade Summit	321	2	238	EE	4880	3-1	89.1	42.0	40.3*	24.8	വ	26.8
Clear Lake	361	29	45	三9压	3500	2-22	59.5	23.3	31.5	10.2	80	10.6
New Dutchman Flat	324A	21	188	8	6400	3-5	116.2	52.3	9•19	36.3	83	9•===
Hogg Pass	351	24	138	7 <u>2</u> E	4755	3-1	107 • 9	50.4	70.9	34.2	o,	36.4
Three Creeks Meadows	331	83	178	9E	2600	3-2	55 •2	26.0	30.7	16.4	က	17.4
HOOD RIVER												
Greenpoint Reservoir	433	28	2M	9E	3400	Measurement		delayed	ı	10.5	~	10.5.
Red Hill	434	21	18	96	4400	2-28	9•69	30.4	78.0	35.6	~2	56.8
Tilly Jane-Mt. Hood	432	15	28	9月	0009	2-25	116.5	53.8	6.99	31.2	ત્ય	49•0
SANDY RIVER												
Clear Lake	361	29	48	9E	3500	2-22	59.5	23.3	31.5	10.2	∞	10.6
Phlox Point-Mt. Hood	452	9	38	日の「	2600	3-1	156.1	73.6	98.9	53.8	27.	50.2
Still Croek	451	25	SS	8 <u>2</u> E	3700	3-1	80.5	8 • 65	% ∞ ∞	<i>)</i> .•6⊤	2	რ <b>%</b> 1
CLACKAMAS RIVER												
Clackamas Lake	592	35	58	8 <u>3</u> E	3400	2-27	57.2	23.8	30.0	9.5	O)	13.0
Peavine Ridge	591	14&15	6.5	7E	3500	3-2	6• 49	31.6	37.9	13.0	12	14•5
WILLAMETTE KIVER												
Cascade Summit	321	7	238	<b>E</b>	4880	3-1	89.1	45.0	40.3*	24.8	ເລ	26.8
Champion	522	12	238	]E	4500	2-28	75.1	36.6	46.9	19.6	11	20 <b>.</b> 8
Hogg Pass	351	24	138	7 <u>2</u> E	4755	3-1	107 • 9	50.4	70.9	34.2	တ	36 • 4
McKenzie	531	35	158	7 <u>3</u> E	4800	2-26	111.2	53.8	64.2	ŧ	1	64 m2
* Telegraphic - su	subject to minor	o minor	revision.	ion								

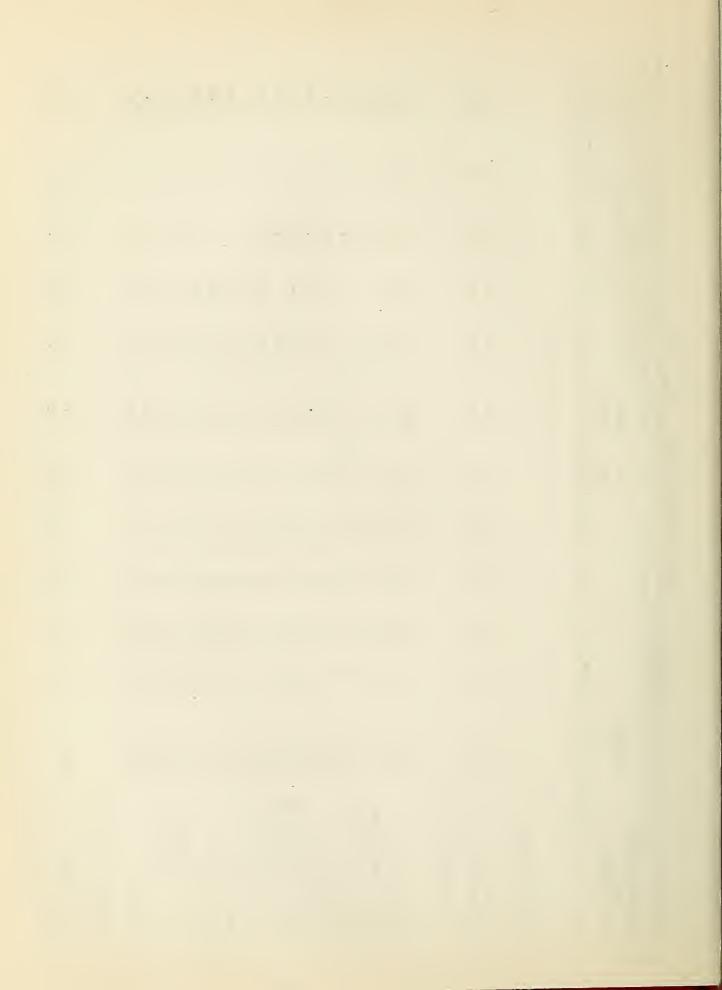


				OREGON		SNOW SURVEYS,	MARCH.						
עדט ע מיי יאדי מה		LOCATION	ION						CCVER 1	MEALSO VII	1		
DEATHALGE BASIN and SNOW COURSE	Number					Da te	Snow	Ma Cer	Same Approxe Date	pproxe	ا د	Avelater	
	State	Sec	Twp.	Range	Eleve	Survey	(In.)	1950	1949	1948	Record	(Inches)	
WILLAMETTE RIVER (C	(Cont'd.)												
Marion Forks Santiam Junction Three Creeks Meadows	553 552 331	28 14 3	11S 13S 17S	7E 7E 9E	2730 3990 5600	3-1	61.8 78.6 55.2	29•4 37•2 26•0	32.9 44.6 30.7	9 • 8 19 • 5 16 • 4	တတလ	11.4	
				H	표] 제 H	이 제 데	RAIN	A G E					
SILVER LAKE													
Silver Creek	942	25&26	298	13E	4900	2-27	7.6	2.8	8.8	€	10	2.8	
CHEWAUCAN RIVER													
Mill Creek	922	٦	348	17E	6200	2-27	20.3	7.5	7.9	2.9	11	6.2	
HARNEY BASIN													
Deer Greek Hart Mountain Idylwild Camp	973 971 961A	17 1 33	36S 36S 20S	26E 25E 31E	6670 6350 5200	Meas Su Meas Su 2-26	Meas.Suspended Meas.Suspended 2-26 19.2	Indef. Indef. 5.5	12.8	2 H 2 2 4 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4	9 14	0 N N 8 8 0	
Izee Summit Rock Spring Starr Ridge	964 134 247B	2 2 3 8 2 2 3 8	168 185 158	29E 32E 31E	5293 5100 5150	2-24 2-27 2-24	29•3 18•7 20•2	7 5 5 5 8	30.9 8.6 9.0	7 4 5 7	<b>444</b>	8 0 6 6 5 7 ·	
WARNER LAKE		•											
Camas Creek	911A	2	398	21E	5720	2-27	23.5	8.3	12.8	4.6	9	8.03	
GUANO LAKE													
Bald Mountain Guano Creek	Nev. 972	17	45N	21E 25E	6720 6480	2-28 Meas.Su	2-28 3.7 Weas.Sus pended	lel Indefe	1 2	T 1	10 8	3 8 5 • 7	



1950
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		TIM : 00 T	140	NTO DOTTO	S NO NO	SOUVELO,	S MUNUIT	1300				
	1	LUCATI ON			1			No.	NE COVER	_	MEASUREMENTS	
DEAINAGE BASIN						1	,	Water	Content	(In•)	ارر	Keoord
	Number					Date	Snow		Same	Same Approx.	Years	Av.Water
SNOT COURSE	Or State	000	Turn	Bon #6	El our	Survey	Depth (Tr.)	1950	Da 1949	Date 1948	of	Content (Theres)
	2	200	24	101160	2010	- A-C	(•117)	7000	フサウエ	7.040	MGCO1 d	(FIICHES)
			Þ	Ö	C	E	<b>ا</b> د د	ر د				
				-i o -i	<b>‡</b>	م -	T 당 당	⊒ 5 ₹				
UMPQUA RIVER												
		(	1	į	() ()	(		c C	0	0	ŗ	(
Champion	522	2 C	238	म म	4500 6316	2-28	75.1	36.95 3	46.99 a	19 <b>.</b> 6	11 6	8°02 9°
ulamond Lake	740	מ	2/2	<b>a</b> 0	OT CC	07-7	0##T	C* T 7	0.00	6.10	13	7001
ROGUE RIVER												
Althouse	7216	17	41S	7W	4400	2-28	32.1	12.6	8.2	0.5	11	4.5
Annie Spring	831	19	318	<b>6E</b>	6018	3-1	87.	36.9	45.0	33.2	16	36.2
Big Red Mountain	729	31	40S	MT	6500	3-1	29●	22.4	1	12.2	<b>~</b> 4	12.2
Billie Creek Divide	722	30	368	5臣	5300	Measurement		delayed		20.5	17	21.1
	725	ы	378	4E	4865	Measur oment		delayed	1	7.8	14	11.6
Grayback Peak	727	ග	40 <b>S</b>	5W	0009	3-4	55.4	24.9	28.3	10.3	ω	16.0
	7221	17	40S	3E	2010	2-27	12.9	6.5	8 %	1.2	∾	5.65
	723	15	398	3E	4900	3-6	27.7	8.6	15.4	6.3	17	හ ග
in	7210	25	40S	2W	6500	3-1	47 • 4	20.8	ı	12.6	Н	12.6
Park Headquarters	838	ω	318	6 <b>E</b>	6450	3-1	110.9	48.3	59.1	37 •0	မ	49.4
alif.)	7220	6	47N	10W	6200	2-25	64.4	30.7	36.6	13.2	ω	21.3
Seven Lakos #1	7211	83	348	2E	0089	3-1	125.5	54.8	76.0ª	ı	4	48€5
Seven Lakes #2	7212	56	338	5臣	6200	3-1	95 • 7	38.5	54.6	4	4	70 €0
Silver Burn	7219	30	308	4E	3720	3-1	46.2	20.8	19.5	0 8	13	10•0
Siskiyou Summit	728	17	70S	2E	4630	2-25	22.4	8°6	12.4	1.6	÷ų r⊶i	2,08
<b></b> -1	7218	12	333	3E	3500	2-28	21•⊄	& &	11.1	9•0	13	3. 8
Wagner Butte	7213	٣	40S	H	0069	3-1	39.4	16,1	20.6	13.1	12	13.9
Whaleback	7217	့လ	318	2E	5140	2-28	85•4	38.4	40.2	24.8	~	32.5
KLAMATH LAKE BASIN												
Annie Spring	831	13	318	<b>E</b>	8018	3-1	87.0	36.9	45.0	33.2	16	36.2
Beatty 2/ d Partly estimated	ರ	22	368	12E	4300	2-28	0	0	0	0	23	≈ • •



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				ONEGO	ONEGON DIVON	O ONVEID,	PLOUITINI 110	Tabo		-		
		LOCATIO	NO					SI	SNOW COVER		MEASULEMENTS	
DRAINAGE BASIN								Water	Content	$(\operatorname{In}_{ullet})$	Past	Record
and	Number					Date	Snow		Same Approx	obrox.	Years	Av • Water
SNOT COURSE	or	Č	E	£	į	Jo ,	Depth	(	Date	0,7	of.	Content
	State	Sec	•dMT.	Twp. Kange	Elev•	our vey	(Tue)	1950	1949	1948	Record	(Inches)
	•											
KLAMATH LAKE BASIN (Cont'd)	(Cont'd)											
Billie Creek Diwide	722	30	368	5臣	5300	Measure	Measurement delayed	laved	ı	20.5	17	21.1
Blv 101 Ranch 2/		22	358	14E	4800	2-28	0.0	0.0	2.8	0.0	23	1.7
-	834	21	278	B	4760	3-1	32.3	13.4	13.7	5.6	13	10.1
Chiloquin 2/		34	348	7E	4187	2-28	0.0	0.0	4.1	0.0	20	1.6
Gerber	839	12	398	13E	4850	Measure	ement delayed	layed	4.7	1	ч	4.7
Crowder Flat (Calif.)		30	47N	11E	5200	3-1	5.5	1.7	6•9	€⊣	6	# <sub>7</sub>
Crystal 2/		56	348	<b>E</b>	4200	2-28	25 •5	10.6	6. 8	6 €5	20	7 .6
Fort Klamath 2/		22	338	7 <u>3</u> E	4150	2-28	5	5•₹	4.5	0,	23	3.9
Harriman Lodge 2/		83	368	9	4200	2-28	14.0	5.0	7.0	0	23	4.0
Hyatt Prairie Res.	723	15	398	3E	4900	3-6	27.7	9.8	15 • 4	6.83	17	9.8
Kirk 2/		Н	338	7E	4533	2-28	20.5	6•9	7 •0	1.0	22	6.1
Lake of the Woods #1	835	11	378	5臣	4960	2-28	36.9	13.1	11.4	4.2	13	7 •8
Park Headquarters	838	ω	318	至9	6450	3-1	110.9	48.3	59.1	37.0	9	49•4
Quartz Mountain	811	~	388	16E	5320	3-2	14.5	6.1	8.5	0.2	11	5.6
Quartz Mountain 2/		33	378	16E	5504	3-1	8•0	3.0	0•9	3.0	19	6.5
Summer Rim	841	15	338	16E	7200	2-24	40.3	14.9	15.3	8.3	10	12.5
Sun Mountain	836	22	328	$7\frac{1}{2}E$	5350	2-28	51.1	19.6	29.0	14.4	12	23.2
#1	7211	83	348	の形	6800	3-1	125.5	54.8	20°94	1	4	48.5
Seven Lakes #2	7212	56	333	5臣	6200	3-1	95 • 7	38.5	54.6	1	4	40.0
	837	4	40S	16E	2600	3-4	18.6	8 4.7	12,0	ı	တ	8.5
GOOSE LAKE BASIN												
Camas Creck	911V	വ	398	21E	5720	2-27	23.5	8.3	12.8	4.6	9	8.3
Quartz Mountain	811	~	388	16E	5320	3-1	14.5	6.1	8.5	0.2	11	5•6
Quartz Mountain 2/		33	378	16E	5504	3-1	8•0	3.0	0•9	3.0	19	6 •5
Strawberry	837	4	<b>S</b> 0₹.	16E	2600	3-4	18•6	8•7	12.0	1	6	8
· · · · · · · · · · · · · · · · · · ·												

d Partly estimated 2/ Water content determined by molting one measured sample (The California Orogon Power Company's station)



			)	REGON	SNOT. SUF	SUKVEYS, FER	FEBKUARY, 1		(De		Data)	
		IO	LOCATION				SNOW	- 1	MEASUREMENTS	MENTS		
DRAINAGE BASIN and	Number					Da te	Snow	Water	Content	(-ur)	Q (4)	Record Av.Water
SNOW COURSE	or State	See.	Twp.	Range	Elev.	of Survey	Depth (In•)	1950	1948	1948	of Record	Content (Inches)
POWDER RIVER											•	
Goodrich Lake	157	34&35	88 8	38臣	6775	2-15	0.46	35.2		No com	No comparative	data
DESCHUTES KIVER												
Caldwell Ranch	326	30	218	38	4400	2-17	42.9	16.5		No com	comparative data	data
HOOD KIVER												
Greenpoint Reservoir Red Hill	433 434	28	2N 1S	<b>三</b> 66	3400 4400	2-3	90.5	29.0 45.8	24.9	7.4	Чα	7 • 4 24 • 2
CLACKAMAS RIVER												
Peavine Ridge	591	14&15	68	7E	3500	2-9	87 • 4	29.9	19.0	6.4	12	9.4
WILLAMETTE RIVER												
McKenzie Cascade Summit Champion Hogg Pass Marion Forks Santiam Junction UMPQUA RIVER Diamond Lake	531 321 522 351 553 552 743	25 12 24 18 19 19	158 238 238 1138 1138 278 268	7 2 2 2 2 3 3 7 7 7 7 7 7 8 6 8 6 8 6 8 6 8 8 8 8 8 8	4800 4880 4500 4755 2730 3990 5315 4215	2-5 2-17 2-15 2-15 2-15 2-15 2-15 2-18	123.8 97.8 87.3 120.6 70.9 95.9 64.1 54.1	41.5 40.9 37.8 48.5 31.0 39.5 27.7 24.5	41•1	No com No com No com No com No com	ive ive ive ive ive	20.1 data data data data data data data
Trap Creek	741	H	275	4五	3800	2-8	55.9	19.6	ŧ	1	4	ಜ



		Av. Water	Content	(inches)		data	data	14.2	data		2.8 data
Data)		Years		Kecord		No comparative data	No comparative data	ω	No comparative data		0.0 No comparative data
(Delayed Data)	BW EST TO	( Tur)		1948		No c	No c	7.1	No c		0°0 No compa
Ď)	MEA SUP	Water content	6	1949				22.0			5.1
1950	SNOW COVER WEASUREMENT OF	water	( i	1950		25.2	18.0	27.7	11.8		22.50
BRUARY.	SNO	Snow	Depth	(Tu•)		68.8	48.7	78.3	30.7		12.2
OREGON SNOW SURVEYS, FEBRUARY, 1950		Date	Jo	Survey		2-13	2-14	2-11	2-16		2-1
SNOW SU			Ç	#IOV.		5300	4865	6200	4630		5200 4850
OREGON	ا جوا		í	Kange		5E	4E	TOW	3日		11E 13E
	LOCATION			sec. Imb.		368	378	47N	40S		47N 39S
	입		Č	Sec		30	3	6	17		30
	1	Number	or	state		722	725	7220	728		839
		DRAINAGE BASIN	SNOW COURSE		ROGUE RIVER	Billie Creek Divide	Fish Lake	Scragg Mountain	Siskiyou Summit	KLAWATH BASIN	Crowder Flat (Calif.) Gerber Dam

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### STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and corps of State Watermasters
Oregon State Highway Engineers

### FEDERAL

Department of Agriculture
Forest Service
Soil Conservation Service
Department of Commerce
Weather Bureau
Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
Indian Service
National Park Service
War Department
Army Engineer Corps

### PUBLIC UTILITIES

California-Pacific Utilities Company Portland General Electric Company The California Oregon Power Company

### MUNICIPALITIES

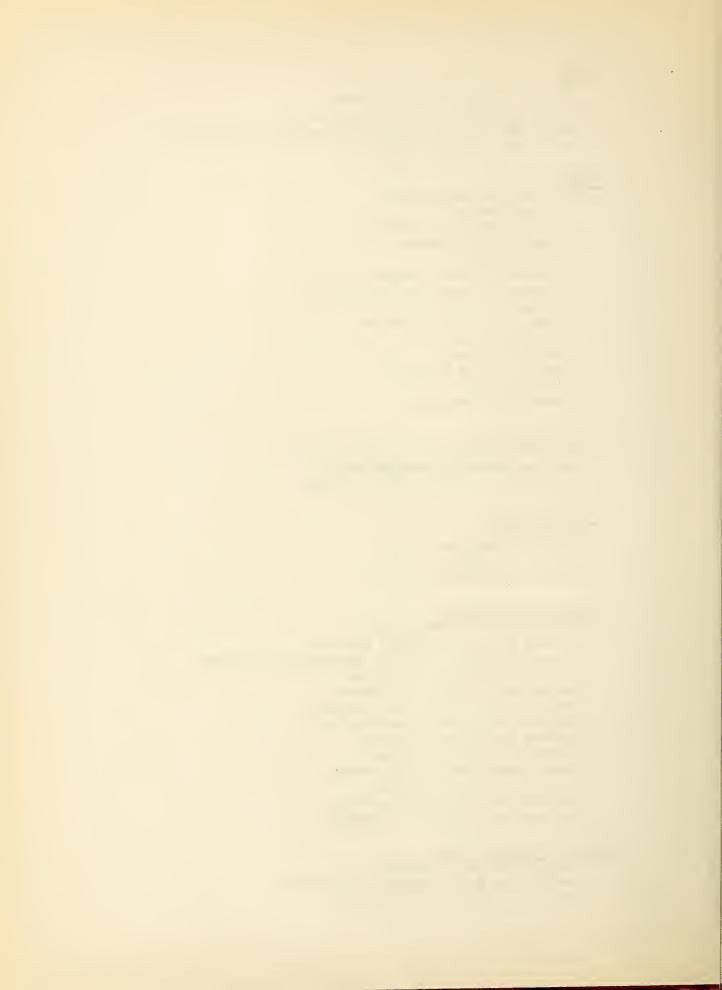
City of Baker City of Corvallis City of LaGrande City of The Dalles

### IPRIGATION DISTRICTS

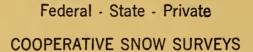
Associated Ditch Companies
Central Oregon Irrigation District
Deschutes County Municipal Improvement District
East Fork Irrigation District
Grants Pass Irrigation District
Jordan Valley Irrigation District
Lakeview Water Users Incorporated
Medford Irrigation District
Ochoco Irrigation District
Rogue River Irrigation District
Talent Irrigation District
Vale-Oregon Irrigation District
Warmsprings Irrigation District

### PRIVATE ORGANIZATIONS

Amalgamated Sugar Company South Wasco Soil Conservation District The Crag Rats-Hood River-Oregon







Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"